

EXHIBIT D



GHS SAFETY DATA SHEET

WELD-ON® 717™ Low VOC Cements for PVC Plastic Pipe

Date Revised: APR 2015

Supersedes: NOV 2014

SECTION I - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: WELD-ON® 717™ Low VOC Cements for PVC Plastic Pipe

PRODUCT USE: Low VOC Solvent Cement for PVC Plastic Pipe

SUPPLIER:

MANUFACTURER: IPS Corporation

17109 South Main Street, Gardena, CA 90248-3127

P.O. Box 379, Gardena, CA 90247-0379

Tel. 1-310-898-3300

EMERGENCY: Transportation: CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International)

Medical: CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International)

SECTION 2 - HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

Acute Toxicity:	Health Category 4	Acute Toxicity:	Environmental None Known	Physical Flammable Liquid	Category 2
Skin Irritation:	Category 3	Chronic Toxicity:	None Known		
Skin Sensitization:	NO				
Eye:	Category 2				

GHS LABEL:



Signal Word:

Danger

WHMIS CLASSIFICATION: CLASS B, DIVISION 2

CLASS D, DIVISION 1B

Hazard Statements		Precautionary Statements	
H225: Highly flammable liquid and vapor		P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking	
H319: Causes serious eye irritation		P261: Avoid breathing dust/fume/gas/mist/vapors/spray	
H332: Harmful if inhaled		P280: Wear protective gloves/protective clothing/eye protection/face protection	
H335: May cause respiratory irritation		P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing	
H336: May cause drowsiness or dizziness		P403+P233: Store in a well ventilated place. Keep container tightly closed	
H351: Suspected of causing cancer		P501: Dispose of contents/container in accordance with local regulation	
EUH019: May form explosive peroxides			

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

CAS#	EINECS #	REACH Pre-registration Number	CONCENTRATION % by Weight
Tetrahydrofuran (THF)	109-99-9	203-726-8	25 - 70
Methyl Ethyl Ketone (MEK)	78-93-3	201-159-0	5 - 36
Cyclohexanone	108-94-1	203-631-1	10 - 25

All of the constituents of this adhesive product are listed on the TSCA inventory of chemical substances maintained by the US EPA, or are exempt from that listing.

* Indicates this chemical is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR372).

indicates that this chemical is found on Proposition 65's List of chemicals known to the State of California to cause cancer or reproductive toxicity.

SECTION 4 - FIRST AID MEASURES

Contact with eyes: Flush eyes immediately with plenty of water for 15 minutes and seek medical advice immediately.

Skin contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If irritation develops, seek medical advice.

Inhalation: Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice.

Ingestion: Rinse mouth with water. Give 1 or 2 glasses of water or milk to dilute. Do not induce vomiting. Seek medical advice immediately.

Likely Routes of Exposure: Inhalation, Eye and Skin Contact

Acute symptoms and effects:

Inhalation: Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages.

Eye Contact: Vapors slightly uncomfortable. Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid.

Skin Contact: Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.

Ingestion: May cause nausea, vomiting, diarrhea and mental sluggishness.

Chronic (long-term) effects: Category 2 Carcinogen

SECTION 5 - FIREFIGHTING MEASURES

Suitable Extinguishing Media:	Dry chemical powder, carbon dioxide gas, foam, Halon, water fog.	HMIS	NFPA	0-Minimal
Unsuitable Extinguishing Media:	Water spray or stream.	Health 2	2	1-Slight
Exposure Hazards:	Inhalation and dermal contact	Flammability 3	3	2-Moderate
Combustion Products:	Oxides of carbon, hydrogen chloride and smoke	Reactivity 0	0	3-Serious
Protection for Firefighters:	Self-contained breathing apparatus or full-face positive pressure airline masks.	PPE B		4-Severe

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep away from heat, sparks and open flame.

Provide sufficient ventilation, use explosion-proof exhaust ventilation equipment or wear suitable respiratory protective equipment.

Prevent contact with skin or eyes (see section 8).

Environmental Precautions: Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course.

Methods for Cleaning up: Clean up with sand or other inert absorbent material. Transfer to a closable steel vessel.

Materials not to be used for clean up: Aluminum or plastic containers

SECTION 7 - HANDLING AND STORAGE

Handling: Avoid breathing of vapor, avoid contact with eyes, skin and clothing.

Keep away from ignition sources, use only electrically grounded handling equipment and ensure adequate ventilation/fume exhaust hoods.

Do not eat, drink or smoke while handling.

Storage: Store in ventilated room or shade below 44°C (110°F) and away from direct sunlight.

Keep away from ignition sources and incompatible materials: caustics, ammonia, inorganic acids, chlorinated compounds, strong oxidizers and isocyanates.

Follow all precautionary information on container label, product bulletins and solvent cementing literature.

SECTION 8 - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

EXPOSURE LIMITS:	Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL	OSHA PEL-Ceiling	CAL/OSHA PEL	CAL/OSHA Ceiling	CAL/OSHA STEL
	Tetrahydrofuran (THF)	50 ppm	100 ppm	200 ppm	N/E	N/E	200 ppm	N/E	250 ppm
	Methyl Ethyl Ketone (MEK)	200 ppm	300 ppm	200 ppm	N/E	N/E	200 ppm	N/E	300 ppm
	Cyclohexanone	20 ppm	50 ppm	50 ppm	N/E	N/E	25 ppm	N/E	N/E

Engineering Controls: Use local exhaust as needed.

Monitoring: Maintain breathing zone airborne concentrations below exposure limits.

Personal Protective Equipment (PPE):

Eye Protection: Avoid contact with eyes, wear splash-proof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields, etc. as may be appropriate for the exposure.

Skin Protection: Prevent contact with the skin as much as possible. Butyl rubber gloves should be used for frequent immersion.

Use of solvent-resistant gloves or solvent-resistant barrier cream should provide adequate protection when normal adhesive application practices and procedures are used for making structural bonds.

Respiratory Protection: Prevent inhalation of the solvents. Use in a well-ventilated room. Open doors and/or windows to ensure airflow and air changes. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed above.

With normal use, the Exposure Limit Value will not usually be reached. When limits approached, use respiratory protection equipment.

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SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Gray or clear, heavy syrupy liquid	Odor Threshold:	0.88 ppm (Cyclohexanone)
Odor:	Ketone		
pH:	Not Applicable		
Melting/Freezing Point:	-108.5°C (-163.3°F) Based on first melting component: THF	Boiling Range:	66°C (151°F) to 156°C (313°F)
Boiling Point:	66°C (151°F) Based on first boiling component: THF	Evaporation Rate:	> 1.0 (BUAC = 1)
Flash Point:	-20°C (-4°F) TCC based on THF	Flammability:	Category 2
Specific Gravity:	0.963 @23°C (73°F)	Flammability Limits:	LEL: 1.1% based on Cyclohexanone
Solubility:	Solvent portion soluble in water. Resin portion separates out.	Vapor Pressure:	UEL: 11.8% based on THF
Partition Coefficient n-octanol/water:	Not Available	Vapor Density:	>2 (Air = 1)
Auto-ignition Temperature:	321°C (610°F) based on THF	Other Data: Viscosity:	Heavy bodied
Decomposition Temperature:	Not Applicable		
VOC Content:	When applied as directed, per SCAQMD Rule 1168, Test Method 316A, VOC content is: ≤ 510 g/l.		

SECTION 10 - STABILITY AND REACTIVITY

Stability:	Stable
Hazardous decomposition products:	None in normal use. When forced to burn, this product gives off oxides of carbon, hydrogen chloride and smoke.
Conditions to avoid:	Keep away from heat, sparks, open flame and other ignition sources.
Incompatible Materials:	Oxidizers, strong acids and bases, amines, ammonia

SECTION 11 - TOXICOLOGICAL INFORMATION

Toxicity:	LD ₅₀	LC ₅₀	Target Organs
Tetrahydrofuran (THF)	Oral: 2842 mg/kg (rat)	Inhalation 3 hrs. 21,000 mg/m ³ (rat)	STOT SE3
Methyl Ethyl Ketone (MEK)	Oral: 2737 mg/kg (rat), Dermal: 6480 mg/kg (rabbit)	Inhalation 8 hrs. 23,500 mg/m ³ (rat)	STOT SE3
Cyclohexanone	Oral: 1535 mg/kg (rat), Dermal: 948 mg/kg (rabbit)	Inhalation 4 hrs. 8,000 PPM (rat)	

Reproductive Effects	Teratogenicity	Mutagenicity	Embryotoxicity	Sensitization to Product	Synergistic Products
Not Established	Not Established	Not Established	Not Established	Not Established	Not Established

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:	None Known
Mobility:	In normal use, emission of volatile organic compounds (VOC's) to the air takes place, typically at a rate of ≤ 510 g/l.
Degradability:	Not readily biodegradable
Bioaccumulation:	Minimal to none.

SECTION 13 - WASTE DISPOSAL CONSIDERATIONS

Follow local and national regulations. Consult disposal expert.

SECTION 14 - TRANSPORT INFORMATION

Proper Shipping Name:	Adhesives	EXCEPTION for Ground Shipping DOT Limited Quantity: Up to 5L per inner packaging, 30 kg gross weight per package. Consumer Commodity: Depending on packaging, these quantities may qualify under DOT as "ORM-D" .
Hazard Class:	3	
Secondary Risk:	None	
Identification Number:	UN 1133	
Packing Group:	PG II	
Label Required:	Class 3 Flammable Liquid	TDG INFORMATION TDG CLASS: FLAMMABLE LIQUID 3 SHIPPING NAME: ADHESIVES UN NUMBER/PACKING GROUP: UN 1133, PG II
Marine Pollutant:	NO	

SECTION 15 - REGULATORY INFORMATION

Precautionary Label Information:	Highly Flammable, Irritant, Carc. Cat. 2	Ingredient Listings: USA TSCA, Europe EINECS, Canada DSL, Australia AICS, Korea ECL/TCCL, Japan MITI (ENCS)
Symbols:	F, Xi	
Risk Phrases:	R11: Highly flammable. R20: Harmful by inhalation. R36/37: Irritating to eyes and respiratory system.	R66: Repeated exposure may cause skin dryness or cracking R67: Vapors may cause drowsiness and dizziness
Safety Phrases:	S9: Keep container in a well-ventilated place. S16: Keep away from sources of ignition - No smoking. S25: Avoid contact with eyes.	S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S33: Take precautionary measures against static discharges. S46: If swallowed, seek medical advise immediately and show this container or label.

SECTION 16 - OTHER INFORMATION

Specification Information:	IPS, Safety Health & Environmental Affairs	All ingredients are compliant with the requirements of the European Directive on RoHS (Restriction of Hazardous Substances).
Department issuing data sheet:	<EHSInfo@ipscorp.com>	
E-mail address:		
Training necessary:	Yes, training in practices and procedures contained in product literature.	
Reissue date / reason for reissue:	4/20/2015 / Updated GHS Standard Format	
Intended Use of Product:	Solvent Cement for PVC Plastic Pipe	

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.